

REMARKS

Claims 1 and 5-8 are currently pending. Of the foregoing, claims 5-8 have been withdrawn from further consideration pursuant to 37 C.F.R. §1.124(b). By this response, Applicants have amended claim 1 without introducing new matter.

Entry of the foregoing amendments and reconsideration of the above-identified application are respectfully requested in view of the following remarks.

I. Rejections Under 35 U.S.C. §112:

Claim 1 has been rejected under 35 U.S.C. §112, first paragraph, as failing to comply the written description requirement, due to stated reasons. In particular, the Examiner notes that there is no support for “a CPU configured to ‘predict’ a maximum output value of an output signal.” (Office Action, page 3).

In response Applicants have amended claim 1 accordingly herein. Specifically, Applicants have now amended the allegedly unsupported language to recite, “a CPU configured to determine reliability of measurement of an output signal”. The foregoing amendment is supported at least by steps S10 through S16 of FIG. 6B and corresponding description thereof on pages 13 through 15.

Applicants believe that all of the now presented amendments are fully supported in the instant application, as originally filed, and as such claim 1 meets the written description requirements. Withdrawal of the rejection under 35 U.S.C. §112 is respectfully requested.

Rejections Under 35 U.S.C. §103:

Claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,727,551 to Takagi (hereafter "Takagi") in view of U.S. Patent No. 5,469,233 to Katsuragi (hereafter “Katsuragi”).

In the interest of expediting prosecution of this application, Applicants have chosen to amend claim 1 as set forth above. In particular, claim 1 has been amended to better define and further clarify the features. Support for the amendatory language of claim 1 can be

found at least in FIGs. 6A and 6B and corresponding description thereof on pages 13-15 of the original disclosure. Amended claim 1 now recites:

“A non-contact tonometer comprising:

an alignment light source for emitting a light flux for alignment of a cornea of an eye to be examined;

a projection optical system for projecting the light flux from the alignment light source onto the cornea of the eye to be examined;

image capture means for sensing, after completing the alignment between the cornea of the eye to be examined and the non-contact tonometer, an image obtained from a reflected alignment light flux which is the light flux projected onto and reflected by the cornea of the eye to be examined;

a cornea deformation means for deforming the cornea of the eye to be examined by blowing pressurized air onto the cornea of the eye to be examined;

an intraocular pressure measurement light source for emitting a measurement light flux for measurement of an intraocular pressure of the eye to be examined;

the projection optical system further projecting the measurement light flux from the intraocular pressure measurement light source onto the cornea of the eye to be examined;

intraocular pressure measurement light receiving means for detecting a reflected measurement light flux which is the measurement light flux projected onto and reflected from the cornea of the eye to be examined; and

a CPU configured to determine reliability of measurement of an output signal which is output from the intraocular pressure measurement light receiving means on the basis of an intensity of the image, at a time of completing the alignment, sensed by the image capture means, and to execute an error processing and a warning processing in accordance with the determined reliability of measurement,

wherein the CPU executes said warning processing by adding a reliability mark to the output signal in a case that an output value of the output signal from the intraocular pressure light receiving means exceeds a predetermined reference value, and

wherein the CPU executes said error processing by generating an error indication in a case that the output value of the signal from the intraocular pressure light receiving means is equal to or smaller than said predetermined reference value.”

In accordance with at least one embodiment of the present invention, if a level "Err" equal to one fourth of the peak with the normal eye is set as the error level and a level "Warning" equal to half of the peak with the normal eye is set as the warning level, in the case that a cornea having a reflectance half the reflectance of the normal eye is measured, the output reaches no more than the warning level even when the measurement is normally performed. Consequently, it will be always judged that the measurement is of low reliability.

In view of the above situation, the value of the output at the peak for the eye to be examined is determined based on the quantity of light received by the alignment detection means, whereby for a cornea with a low reflectance, the error level and the warning level are changed to "Err" and "Warning" respectively in a relative manner (based on the intensity of the light received) as shown in FIG. 8. Thus, variations in determination of reliability due to differences in the reflectance of corneas Ec can be reduced. As a result, stable determination of reliability can be realized irrespective of differences in the reflectance of eyes to be examined. (See Applicants detailed description, pages 16 and 17).

The teachings of the Takagi and Katsuragi references have been address by Applicants in previously submitted responses. (See, for example, pages 6-7 of Applicants submission filed February 29, 2008, and pages 5-7 of Applicants submission filed September 29, 2008). Applicants' remarks regarding Takagi and Katsuragi made in these submissions are incorporated herein by reference. In addition, Applicants respectfully submit that neither Takagi nor Katsuragi, alone or in combination, teach or suggest each and every feature of amended claim 1. In particular the cited references fail to disclose or suggest at least "a CPU configured ... to execute an error processing and a warning processing in accordance with the determined reliability of measurement, wherein the CPU executes said warning processing by adding a reliability mark to the output signal in a case that an output value of the output signal from the intraocular pressure light receiving means exceeds a predetermined reference value" in conjunction with the other limitations, as now recited in amended claim 1.

The Takagi reference discloses a non-contact tonometer measures an intraocular pressure precisely based on a deformation amount of a cornea when a pressurized pulse of air is injected to the cornea. The intraocular pressure is measured on the basis of the maximum value of a correlation function curve, **instead of detecting a peak of a light changing curve.** (Abstract). A memory 83 stores a standard curve F (see FIG. 5) showing an ideal light changing curve of the receiving sensor 54 on the basis of the deformation of the cornea C. (C6, L19-22). The arithmetic control circuit 87 includes the memory 81 which stores the value of the light received by the receiving sensor 54. The intensity of the reflected light of the receiving sensor 54 is shown as the light changing curve R (see FIG. 6) in accordance with the amount of deformation of the cornea C caused by the injected air pulse. The memory 81 stores a receiving

signal value indicative of the light changing curve R. (C7, L38-50). Thus, Takagi discloses the intraocular pressure is measured on the basis of the maximum value M of the correlation function, **instead of detecting a peak of the light changing curve R** (i.e., the intensity of the light reflected by the cornea and detected by the receiving sensor 54).

In addition, Applicants assert that Takagi does not disclose or suggest “CPU executes said warning processing by adding a reliability mark to the output signal in a case that an output value of the output signal from the intraocular pressure light receiving means exceeds a predetermined reference value.” Takagi merely discloses a tonometer that executes alignment on the basis of a correlation function of an ideal light changing curve F of the receiving sensor 54 and a *calculated* light changing curve R. Specifically, the reflected alignment light as used in the Takagi reference is solely used to detect an alignment condition of the eye to be examined. See, e.g., Takagi, column 4, lines 29-67; and column 5, lines 1-54.

In the Office Action, Katsuragi is cited as disclosing *inter alia* “a CPU (as best seen in Figure 3) configured to ... execute error processing (55)”. (Office Action, page 5—item 10).

Applicants respectfully assert that Katsuragi does not fulfill the above-noted deficiencies of the Takagi reference. In particular, Katsuragi—like Takagi—fails to disclose or suggest “a CPU configured ... to execute an error processing *and* a warning processing in accordance with the determined reliability of measurement, wherein the CPU executes said warning processing by adding a reliability mark to the output signal in a case that an output value of the output signal from the intraocular pressure light receiving means exceeds a predetermined reference value, *and* wherein the CPU executes said error processing by generating an error indication in a case that the output value of the signal from the intraocular pressure light receiving means is equal to or smaller than said predetermined reference value” in conjunction with the other limitations, as now recited in amended claim 1.

In view of the above, Applicants respectfully submit that amended claim 1 is patentably distinguishable over Takagi and Katsuragi, either taken alone or in combination. Withdrawal of the §103 rejection and prompt allowance of amended claim 1 is respectfully solicited.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

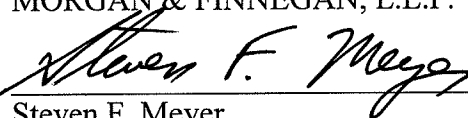
The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 1232-5178. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 1232-5178. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: January 12, 2009

By: _____


Steven F. Meyer
Registration No. 35,613

Correspondence Address:

Address Associated With Customer Number:
27123

(212) 415-8700 Telephone
(212) 415-8701 Facsimile